

**QT-Brightek Chip LED Series**

**SMD 1205 LED**

**Part No.: QBLP655-BG**

Product: QBLP655-BG	Date: September 27, 2016	Page 1 of 10
	Version# 2.0	

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## Introduction

**Feature:**

- Diffused lens
- Package in tape and reel
- Ultra bright 1205 package
- InGaN technology
- Viewing angle: 140 degrees

**Description:**

These ultra-bright 655 LEDs have a height profile of 1.10mm. With a combination of high brightness output and small footprint, these LEDs are ideal for keypad backlighting and status indication.

**Application:**

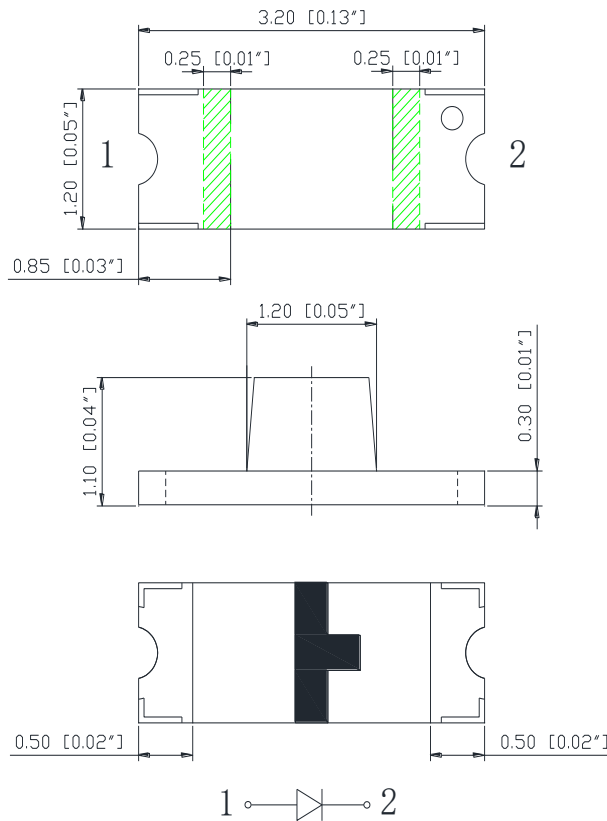
- Status indication
- Back lighting application

**Certification & Compliance:**

- TS16949
- ISO9001
- RoHS Compliant



**Dimension:**



Units: mm / tolerance = +/-0.1mm

**Electrical / Optical Characteristic (Ta=25 °C)**

Product	Color	I <sub>F</sub> (mA)	V <sub>F</sub> (V)		CIE Coordinates			I <sub>V</sub> (mcd)	
			Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.
QBLP655-BG	Aqua White	20	3.0	3.4	-	X=0.20 Y=0.34	-	100	180

**Absolute Maximum Rating**

Material	P <sub>d</sub> (mW)	I <sub>F</sub> (mA)	I <sub>FP</sub> (mA)*	V <sub>R</sub> (V)	T <sub>OP</sub> (°C)	T <sub>ST</sub> (°C)	T <sub>SOL</sub> (°C)**
InGaN	102	30	125	5	-40 ~ +80	-40 ~ +85	260

\*Duty 1/8 @ 1kHz

\*\* IR Reflow for no more than 10 sec @ 260 °C

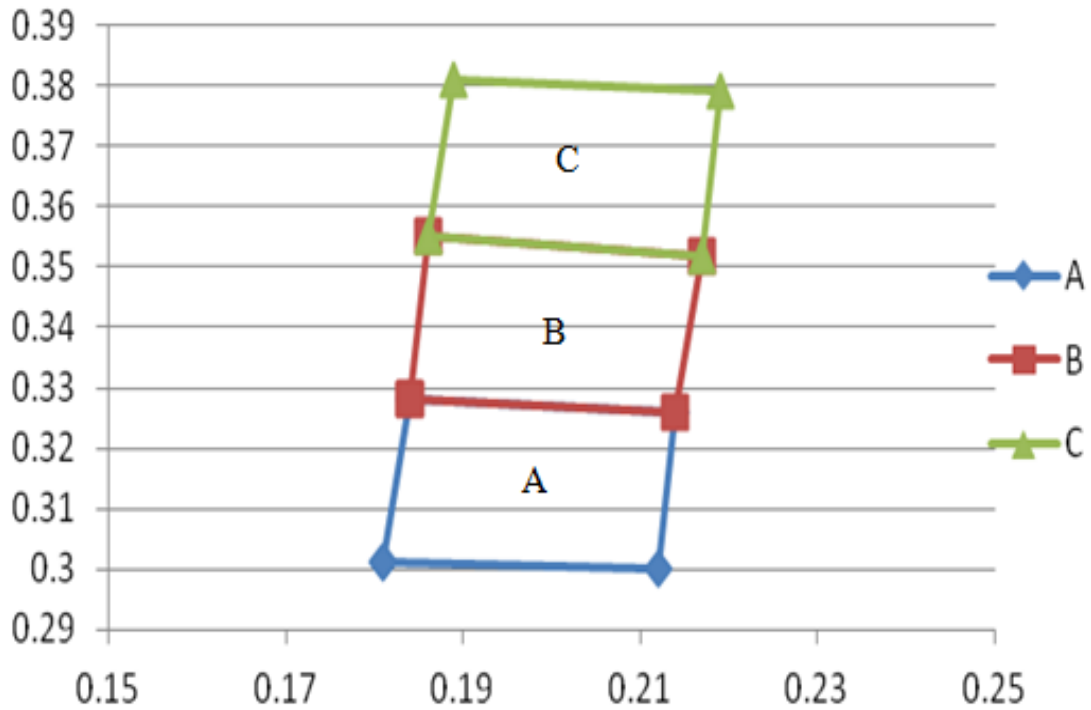
**Forward Voltage V<sub>F</sub> @ I<sub>F</sub>=20mA**

Bin	Min.	Max.	Unit
f	2.8	3.1	V
g	3.1	3.4	

**Luminous Intensity I<sub>V</sub> @ I<sub>F</sub>=20mA**

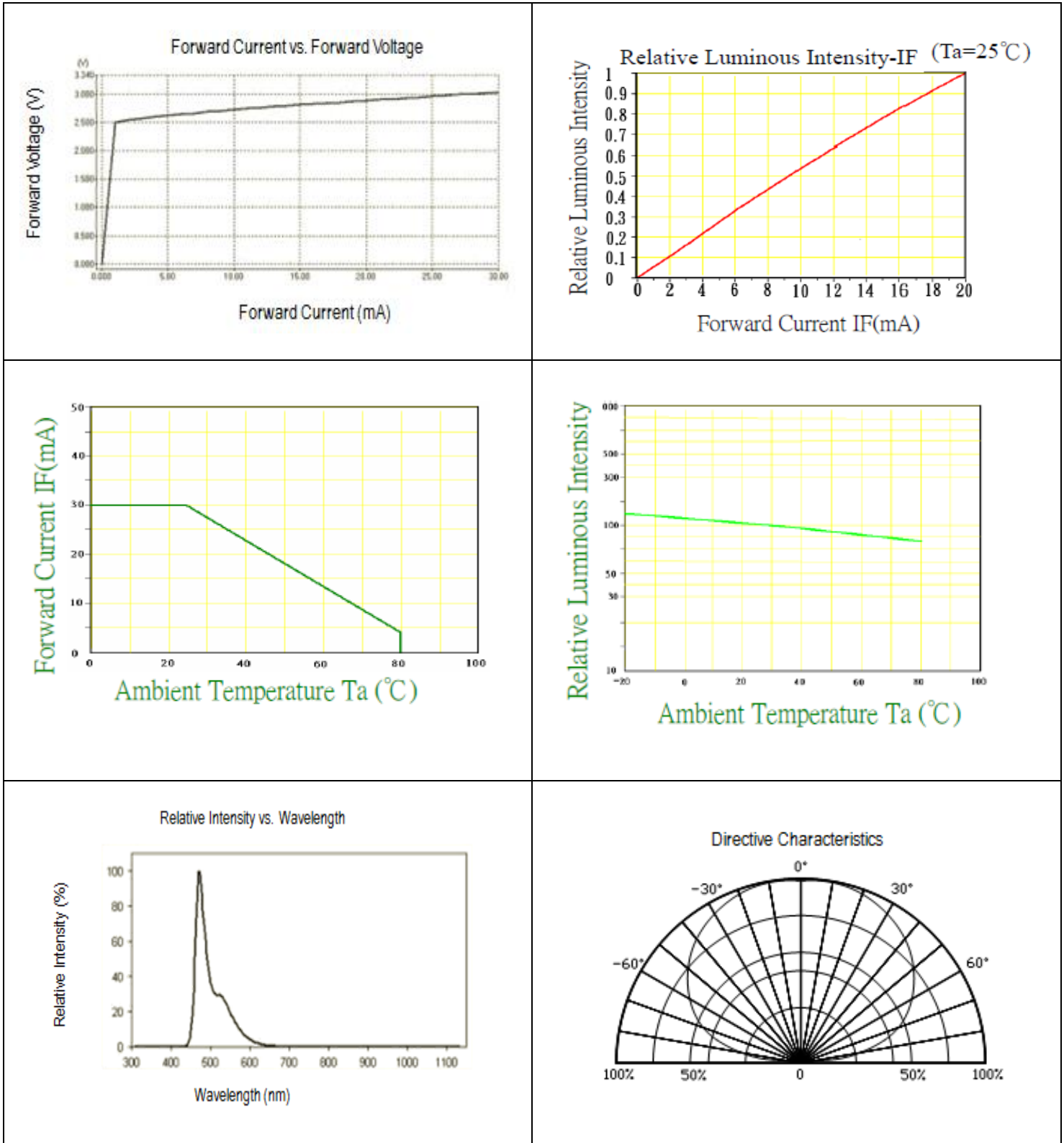
Bin	Min.	Max.	Unit
J	100	125	mcd
K	125	160	
L	160	200	
M	200	250	

### CIE Chromaticity Diagram



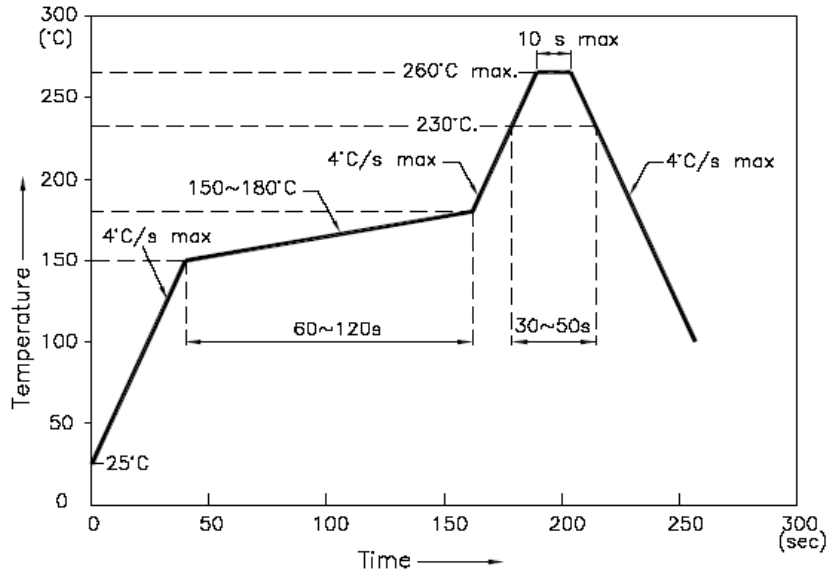
Rank	Chromaticity coordinates					
	X	Y	X	Y	X	Y
A	X	0.181	0.184	0.214	0.212	
	Y	0.301	0.328	0.326	0.300	
B	X	0.184	0.186	0.217	0.214	
	Y	0.328	0.355	0.352	0.326	
C	X	0.186	0.189	0.219	0.217	
	Y	0.355	0.381	0.379	0.352	

### Characteristic Curves

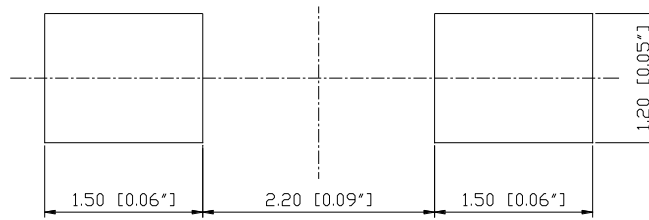


## Solder Profile & Footprint

- Recommended tin solder specifications: melting temperature in the range of 178~192 °C
- The recommended reflow soldering profile is as follows (temperatures indicated are as measured on the surface of the LED resin):



### Recommended Pad Layout

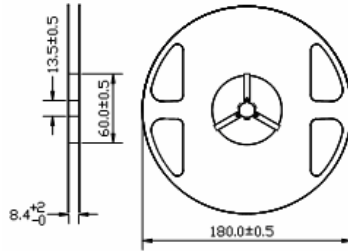


Units: mm

Tolerance: ± 0.1mm

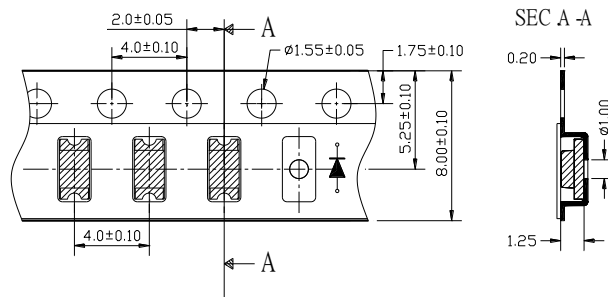
## Packing

### Reel Dimension:



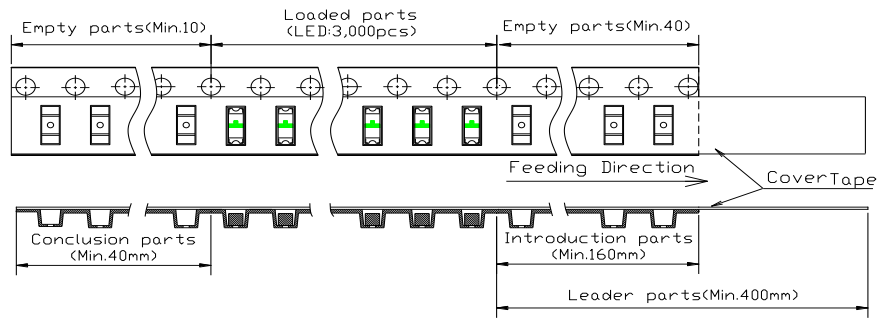
Unit: mm

### Tape Dimension:

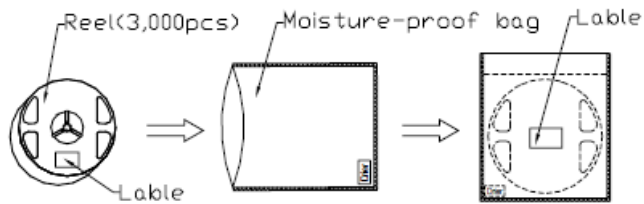


Unit: mm

### Arrangement of Tape:



### Packaging Specifications:





**Labeling**

Part No: \_\_\_\_\_

Customer P/N: \_\_\_\_\_

Item: \_\_\_\_\_

Q'ty: \_\_\_\_\_

Vf: \_\_\_\_\_

Iv: \_\_\_\_\_

WI: \_\_\_\_\_

Date: \_\_\_\_\_

**Made in China****Ordering Information**

Part #	Orderable Part #	Spec Range	Quantity per reel
QBLP655-BG	QBLP655-BG	Iv=180mcd typ. @ If=20mA / CIE Coordinate: (X=0.20, Y=0.34) typ.	3,000 units

**Revision History**

Description:	Revision #	Revision Date
New Release of QBLP655-BG	V1.0	03/27/2014
Update dimension drawing to reflect the new PCB	V2.0	09/27/2016

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2. A critical component in any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.